

#### From the INTERNATIONAL BUREAU

#### **PCT**

#### **NOTIFICATION OF ELECTION**

(PCT Rule 61.2)

To:

United States Patent and Trademark Office (Box PCT) Crystal Plaza 2 Washington, DC 20231 ÉTATS-UNIS D'AMÉRIQUE

Date of mailing (day/month/year)
02 February 1999 (02.02.99)

International application No.
PCT/CA98/00559

International filing date (day/month/year)
09 June 1998 (09.06.98)

Applicant

LEMIEUX, Alain

The designated Office is hereby notified of its election made:  X in the demand filed with the International Preliminary Examining Authority on:  08 January 1999 (08.01.99)	
in a notice effecting later election filed with the International Bureau on:	
was not  made before the expiration of 19 months from the priority date or, where Rule 32 applies, Rule 32.2(b).	within the time limit under

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland Authorized officer

S. Cruz

Telephone No.: (41-22) 338.83.38

Facsimile No.: (41-22) 740.14.35

## **PCT**

# WORLD INTELLECTUAL PROPERTY ORGANIZATION International Bureau



## INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification <sup>6</sup>: E01C 13/08

A1

(11) International Publication Number:

WO 98/56993

(43) International Publication Date:

17 December 1998 (17.12.98)

(21) International Application Number:

PCT/CA98/00559

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9 June 1998 (09.06.98)

(30) Priority Data:

2,206,295

9 June 1997 (09.06.97)

CA

(71) Applicant (for all designated States except US): 2752-3273

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(72) Inventor; and

(75) Inventor/Applicant (for US only): LEMIEUX, Alain [CA/CA]; 1360 Cherbourg Street, Sherbrooke, Quebec J1K 2P2 (CA).

(74) Agent: MacRAE & CO.; P.O. Box 806, Station "B", Ottawa, Ontario K1P 5T4 (CA).

(81) Designated States: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG).

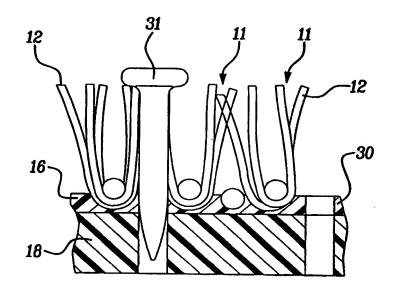
#### **Published**

With international search report.

(54) Title: SYNTHETIC TURF GAME SURFACE

#### (57) Abstract

A synthetic turf surface for golf courses, tennis courts and other grass-surfaced game playing fields is formed of a synthetic grass carpet having a flexible base sheet (14) with closely spaced—apart upright, blade—like strands (12) of plastic material forming a dense grass—like surface. The carpet is supported upon a cushioning underpad (18) which is formed of a thick, molded sheet of open cell, expanded bead polypropylene. The resiliently compressible polypropylene underpad combined with the synthetic grass carpet closely simulates the feel of a natural grass covered playing surface.



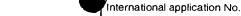


# PCT

### INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

FOR FURTHER see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below.  ACTION				
International application No.	International filing date (day/month/year)	(Earliest) Priority Date (day/month/year)		
PCT/CA 98/00559	09/06/1998	09/06/1997		
Applicant  2752-3273 QUEBEC INC. et a	al.			
according to Article 18. A copy is being tra  This International Search Report consists				
Certain claims were found uns     Unity of invention is lacking(see		·		
international search was carried	ntains disclosure of a nucleotide and/or amir out on the basis of the sequence listing with the international application.  ished by the applicant separately from the interpolation but not accompanied by a statement to to matter going beyond the disclosure in the	ernational application, he effect that it did not include		
Trar	nscribed by this Authority			
, 1	text is approved as submitted by the applican text has been established by this Authority to			
X the t	text is approved as submitted by the applican text has been established, according to Rule text. The applicant may, within one month from the Report, submit comments to this Authority.	38.2(b), by this Authority as it appears in the date of mailing of this International		
beca	ished with the abstract is: suggested by the applicant. ause the applicant failed to suggest a figure. ause this figure better characterizes the inven	None of the figures.		



### INTERNATIONAL SEARCH REPORT

PCT/CA 98/00559

Box III TEXT OF THE ABSTRACT (Continuation of item 5 of the first sheet)

A synthetic turf surface for golf courses, tennis courts and other grass-surfaced game playing fields is formed of a synthetic grass carpet having a flexible base sheet (14) with closely spaced-apart upright, blade-like strands (12) of plastic material forming a dense grass-like surface. The carpet is supported upon a cushioning underpad (18) which is formed of a thick, molded sheet of open cell, expanded bead polypropylene. The resiliently compressible polypropylene underpad combined with the synthetic grass carpet closely simulates the feel of a natural grass covered playing surface.

IPC 6 E01C13/08				
According to International Patent Classification (IPC) or to both national classification and IPC				
	SEARCHED	ication and IrC		
Minimum de	ocumentation searched (classification system followed by classifica	ition symbols)		
IPC 6	F01C			
Documenta	tion searched other than minimumdocumentation to the extent that	such documents are included in the fields se	arched	
Electronic d	ata base consulted during the international search (name of data b	pase and, where practical, search terms used)		
	-			
C. DOCUM	ENTS CONSIDERED TO BE RELEVANT			
Category °	Citation of document, with indication, where appropriate, of the re	elevant passages	Relevant to claim No.	
Α	US 4 505 960 A (LEFFINGWELL JAME	S W) 19	1	
	March 1985		_	
	cited in the application			
	see column 4, line 40 - line 46 see abstract			
Α	US 4 830 798 A (MAEDA HIROFUMI) 1989	16 May	1	
	see abstract		·	
Α	US 5 373 667 A (LEMIEUX ALAIN) 20 December 9			
	see abstract			
		*		
Furth	er documents are listed in the continuation of box C.	χ Patent family members are listed in	n annex.	
° Special cat	egories of cited documents :	"T" later document published after the interi	national filing date	
	nt defining the general state of the art which is not ered to be of particular relevance	or priority date and not in conflict with t cited to understand the principle or the	the application but	
"E" earlier d	ocument but published on or after the international	invention "X" document of particular relevance; the cl	aimed invention	
filing da	nt which may throw doubts on priority claim(s) or	cannot be considered novel or cannot involve an inventive step when the doc	be considered to	
citation	s cited to establish the publication date of another or other special reason (as specified)	"Y" document of particular relevance; the cl cannot be considered to involve an inv	aimed invention entive step when the	
other m		document is combined with one or moi ments, such combination being obviou	e other such docu-	
"P" docume later the	nt published prior to the international filing date but an the priority date claimed	in the art. "&" document member of the same patent for	·	
Date of the a	ctual completion of theinternational search	Date of mailing of the international sear		
28	B August 1998	04/09/1998		
Name and m	alling address of the ISA	Authorized officer		
	European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk			
	Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016	Dijkstra, G		

# INTERNATIONAL SEARCH REPORT

mation on patent family members

national Application No PCT/CA 98/00559

Patent document cited in search report	Publication date	Patent family member(s)	Publication date	
US 4505960	A 19-03-1985	AU 564195 B	06-08-1987	
		AU 3181284 A	14-02-1985	
		CA 1229854 A	01-12-1987	
		EP 0168545 A	22-01-1986	
		JP 1731938 C	17-02-1993	
		JP 4021582 B	10-04-1992	
		JP 60071246 A	23-04-1985	
US 4830798	A 16-05-1989	CA 1274662 A	02-10-1990	
		DE 3777317 A	16-04-1992	
		DK 483687 A	17-03-1988	
		EP 0263989 A	20-04-1988	
		FI 874016 A,B,	17-03-1988	
		JP 8300387 A	19-11-1996	
		JP 6059694 B	10-08-1994	
		JP 63183832 A	29-07-1988	
		KR 9510982 B	26-09-1995	
		NO 175065 B	16-05-1994	
US 5373667 A	20-12-1994	US 5356344 A	18-10-1994	



3

International Application No.
International Filing Date
Name of receiving Office and "PCT International Application"

7218-2

REQUEST The undersigned requests that the present international application be processed according to the Patent Cooperation Treaty. Applicant's or agent's file reference 7218-002/POA (if desired) (12 characters maximum) Box No. I TITLE OF INVENTION SYNTHETIC TURF GAME SURFACE Box No. II APPLICANT Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country. The country of the address indicated in this Box is the applicant's State (i.e. country) of residence if no State of residence is indicated below.) This person is also inventor. 2752-3273 Quebec Inc. Telephone No. 1000 de la Gauchetiere - Suite 2900 514-878-3249 Montreal, Quebec H3B 4W5 Facsimile No. CANADA Teleprinter No. State (i.e. country) of nationality: State (i.e. country) of residence: Canada Canada all designated States except the United States of America This person is applicant all designated the United States the States indicated in for the purposes of: of America only the Supplemental Box FURTHER APPLICANT(S) AND/OR (FURTHER) INVENTOR(S) Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country. The country of the address indicated in this This person is: Box is the applicant's State (i.e. country) of residence if no State of residence is indicated below.) LEMIEUX, Alain applicant only 1360 Cherbourg Street Sherbrooke, Quebec applicant and inventor J1K 2P2 CANADA inventor only (If this check-box is marked, do not fill in below.) State (i.e. country) of nationality: State (i.e. country) of residence: Canada Canada This person is applicant all designated States except the United States of America the United States of America only all designated the States indicated in for the purposes of: States the Supplemental Box Further applicants and/or (further) inventors are indicated on a continuation sheet. Box No. IV AGENT OR COMMON REPRESENTATIVE; OR ADDRESS FOR CORRESPONDENCE The person identified below is hereby/has been appointed to act on behalf of the applicant(s) before the competent International Authorities as: agent common representative Name and address: (Family name followed by given name; for a legal entity, full official Telephone No. designation. The address must include postal code and name of country.) (819) 770-8842 MacRae & Co. P.O. Box 806, Station "B" Facsimile No. Ottawa, Ontario K1P 5T4 (819) 770-8847 **CANADA** Teleprinter No. Mark this check-box where no agent or common representative is/has been appointed and the space above is used instead to indicate a special address to which correspondence should be sent.

Box No.V	DESIGNATION OF	FSTATES
DUX INU. V	DESIGNATION OF	ULALLU

The following designations are hereby made under Rule 4.9(a) (mark the applicable check-boxes; at least one must be marked):

#### **Regional Patent**

- AP ARIPO Patent: GH Ghana, GM Gambia, KE Kenya, LS Lesotho, MW Malawi, SD Sudan, SZ Swaziland, UG Uganda, ZW Zimbabwe, and any other State which is a Contracting State of the Harare Protocol and of the PCT
- EA Eurasian Patent: AM Armenia, AZ Azerbaijan, BY Belarus, KG Kyrgyzstan, KZ Kazakhstan, MD Republic of Moldova, RU Russian Federation, TJ Tajikistan, TM Turkmenistan, and any other State which is a Contracting State of the Eurasian Patent Convention and of the PCT
- EP European Patent: AT Austria, BE Belgium, CH and LI Switzerland and Liechtenstein, DE Germany, DK Denmark, ES Spain, FI Finland, FR France, GB United Kingdom, GR Greece, IE Ireland, IT Italy, LU Luxembourg, MC Monaco, NL Netherlands, PT Portugal, SE Sweden, and any other State which is a Contracting State of the European Patent Convention and of the PCT
- OA OAPI Patent: BF Burkina Faso, BJ Benin, CF Central African Republic, CG Congo, CI Côte d'Ivoire, CM Cameroon, GA Gabon, GN Guinea, ML Mali, MR Mauritania, NE Niger, SN Senegal, TD Chad, TG Togo, and any other State which is a member State of OAPI and a Contracting State of the PCT (if other kind of protection or treatment desired, specify on dotted line).

Natio	National Patent (if other kind of protection or treatment desired, specify on dotted line):				
$\boxtimes$	AL	Albania	$\boxtimes$	LT	Lithuania
$\boxtimes$	AM	Armenia	$\boxtimes$	LU	Luxembourg
$\boxtimes$	AT.	Austria	$\boxtimes$	LV	Latvia
$\boxtimes$	AU	Australia	$\boxtimes$	MD	Republic of Moldova
X	ΑZ	Azerbaijan	X		Madagascar
X	BA	Bosnia and Herzegovina	$\boxtimes$		The former Yugoslav Republic of Macedonia
X	BB	Barbados			
$\boxtimes$	BG	Bulgaria	$\times$	MN	Mongolia
$\boxtimes$	BR	Brazil	$\boxtimes$		Malawi
$\boxtimes$	BY	Belarus	$\boxtimes$		Mexico
$\boxtimes$	CA	Canada	$\boxtimes$		Norway
$\boxtimes$		and LI Switzerland and Liechtenstein	$\boxtimes$		New Zealand
$\boxtimes$	CN	China	$\boxtimes$		Poland
$\boxtimes$	CU	Cuba	$\boxtimes$		Portugal
$\boxtimes$	CZ	Czech Republic	$\boxtimes$		Romania
×	DE	Germany	$\boxtimes$		Russian Federation
×	DK	Denmark	$\boxtimes$	SD	Sudan
$\boxtimes$	EE	Estonia	$\overline{\boxtimes}$		Sweden
×	ES	Spain	$\boxtimes$		Singapore
$\boxtimes$	FI	Finland	$\overline{\mathbf{X}}$	SI	Slovenia
$\boxtimes$	GB	United Kingdom	X		
$\boxtimes$	GE	Georgia	X		Sierra Leone
×		Ghana	$\boxtimes$		Tajikistan
×		Gambia	X		Turkmenistan
$\boxtimes$		Guinea-Bissau	$\boxtimes$		Turkey
$\boxtimes$		Hungary	X		Trinidad and Tobago
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×	IL	Israel	$\boxtimes$		
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×	KG	Kyrgyzstan			Viet Nam
×	KP	Democratic People's Republic of Korea			
K-M	KF	Democratic reopies Republic of Rolea			
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In addition to the designations made above, the applicant also makes under Rule 4.9(b) all designations which would be permitted under the PCT except the designation(s) of

applicant declares that those additional designations are subject to confirmation and that any designation which is not confirmed before the expiration of 15 months from the priority date is to be regarded as withdrawn by the applicant at the expiration of that time limit. (Confirmation of a designation consists of the filing of a notice specifying that designation and the payment of the designation and confirmation fees. Confirmation must reach the receiving Office within the 15-month time limit.)

Sheet No. ...3...

Box No. VI PRIORITY C	LAIM	Furth	er priority claims ar	e indicated in the	e Supplemental Box
The priority of the following e				o maiotica in th	e Supplemental Box
Country (in which, or for which, the application was filed)	Fi	ling Date month/year)	Applicati	on No.	Office of filing (only for regional or international application)
item (1)	9 .	lune 1997			
Canada	(0	9-06-97)	2,206,295		Canada
item (2)					
	(	)			
item (3)	(	)			
Mark the following check-box if present international application.  The receiving Office is h	n is the receivin	ig Office (a fee may bo	e required):		which for the purposes of the
The receiving Office is he Bureau a certified copy	of the earlier ap	plication(s) identified	above as item(s):	1	
Box No. VII INTERNATIO	ONAL SEARC	CHING AUTHORIT	Y		
Choice of International Search are competent to carry out the inter-	national search,	indicate the Authority ch	osen; the two-letter c	ode may be used):	
Earlier search Fill in where a sout or requested and the Authority such search or request either by refe Country (or regional Office):	is now requeste erence to the rele	d to base the internatio	nal search to the ex	tent nossihle on i	he results of that continue accuse
Box No. VIII CHECK LIST	Γ				
This international application the following number of sheet		1 separate	polication is accomsigned 5. fattorney		em(s) marked below: culation sheet
1. request :	3 sheets		general	Cenarat	a indications concoming
2. description:	7 sheets		f attorney 6.		e indications concerning ed microorganisms
3. claims :	2 sheets		t explaining 7.	nucleot	tide and/or amino acid
4. abstract :	1 sheets	lack of s	-	sequen	ce listing (diskette)
5. drawings :	2 sheets 15 sheets		document(s) d in Box No. VI s):	other (s	specify):
Figure No. 9 of th	e drawings (if a	any) should accompan	y the abstract when	it is published.	_
Box No. IX SIGNATURE (	OF APPLICAN	NT OR AGENT			
Next to each signature, indicate obvious from reading the request	the name of th	he person signing and	the capacity in w	hich the person	signs (if such capacity is not
2752-3273 Quebec Inc. Alain Lemieux	·				
D14					·
H. Wayne Rock, Partner MacRae & Co.				•	
1 Data of catual accidence		For receiving Office	e use only		
Date of actual receipt of the printernational application:      Compared data of output printernational applications					2. Drawings:
<ol> <li>Corrected date of actual receitimely received papers or dra purported international applic</li> </ol>	wings completi ation:	ng the			received:
4. Date of timely receipt of the a corrections under PCT Article	required e 11(2):			<del></del>	not received:
<ol><li>International Searching Authorspecified by the applicant:</li></ol>	ority ISA/	6.	Transmittal of until search fee	search copy dela	yed
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Form PCT/RO/101 (last sheet) (January 1994; reprint January 1998)

LegalStar 1998, Form PCTREQ

See Notes to the request form

# PATENT COOPERATION TREATY REC'D 1 1 MAY 1999

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WIPO

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## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's	or ag	ent's file reference		See Notifica	tion of Transmittal of International		
24169	24169 FOR FURTHER ACTION Preliminary Examination Report (Form PCT/IPEA/416)			/416) 			
International application No.			International filing date (day/month/year)		Priority date (day/month/year)		
PCT/CA	98/00	559	09/06/1998		09/06/1997		
	International Patent Classification (IPC) or national classification and IPC E01C13/08						
Applicant				·			
2752-32	73 Q	UEBEC INC. et al.		· · · · · · · · · · · · · · · · · · ·			
		ational preliminary exami smitted to the applicant a		by this Inter	national Preliminary Examining A	Authority	
2. This	REPO	PRT consists of a total of	4 sheets, including this cover st	heet.		į	
b	een a	mended and are the bas		ontaining red	, claims and/or drawings which h tifications made before this Author PCT).		
These	e ann	exes consist of a total of	sheets.				
3. This	eport	contains indications rela-	ting to the following items:				
1	$\boxtimes$	Basis of the report					
II		Priority					
111			pinion with regard to novelty, inv	entive step a	nd industrial applicability		
IV		Lack of unity of inventio					
V	×		nder Article 35(2) with regard to in this suporting such statement	novelty, inve	ntive step or industrial applicabilit	y;	
VI		Certain documents cite					
VII		Certain defects in the in	ternational application				
VIII	VIII 🛚 Certain observations on the international application						
Date of sub	missic	n of the demand	Date of c	completion of the	nis report		
08/01/19	99				0 7. 05. 99		
		address of the international ning authority:	Authorize	ed officer	(green	AGOVES M. TOUTH	
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Tel. (+49-89) 2399-0 Tx: 523656 epi Fax: (+49-89) 2399-4465			epmu d	- No. ( .40.00	) 2200 2402	3 2045 - \$23.50 18	

# INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No. PCT/CA98/00559

### I. Basis of the report

1.	This report has been drawn on the basis of (substitute sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to the report since they do not contain amendments.):				
	Description, pages:				
	1-7		as originally filed		
	Cla	ims, No.:			
	1-1	1	as originally filed		
	Dra	wings, sheets:			
	1/2	-2/2	as originally filed		
2.	The	amendments have	e resulted in the cancellation of:		
		the description,	pages:		
		the claims,	Nos.:		
		the drawings,	sheets:		
3.			en established as if (some of) the amendments had not been made, since they have been beyond the disclosure as filed (Rule 70.2(c)):		
4.	Add	litional observations	s, if necessary:		

# INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No. PCT/CA98/00559

- V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- 1. Statement

Novelty (N)

Yes:

Claims 1-11

No: Claims

Inventive step (IS)

Yes:

Claims 1-11

No:

Claims

Claims

Industrial applicability (IA)

Yes:

Claims 1-11

No:

2. Citations and explanations

see separate sheet

### VIII. Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

see separate sheet

Several documents cited in the description (see for example US-A-4 389 435 (D1)) or in the search report (see for example US-A 4 505 960 (D2) or US-A-5 373 667 (D3)) disclose the features of the first part of claim 1.

Moreover, some documents (see for example US-A-4 505 960 (D2) or US-A-5 373 667 (D3)) disclose an underpad made of polypropylene.

All these documents cite a golf course surface as application of the synthetic golf surface.

Consequently all these features could be considered as being generally known.

- 2. The subject-matter of claim 1 differs from this state of the art in that the polypropylene used for the underpad is in the form of bead.
- 3. Polypropylene bead are well known (cf. US-A-4 830 798 (D4) but there is no hint in the numerous cited documents for using polypropylene bead material in combination with an artificial grass carpet as a game playing field. The use of bead for the underpad improve the feeling of playing on natural grass, which is particularly adapted for golf courses.

Consequently the subject matter of claim 1 is new and inventive (art. 33(2) and (3) PCT).

- 4. Claims 2-11 are dependent claims of claim 1 and are also new and inventive.
- 5. The features of the claims are not provided with reference signs placed in parentheses (Rule 6.2(b) PCT).

The units used in the description and in the claims are not <u>additionally</u> expressed in terms of the units stipulated by Rule 10.1(a) and (b) PCT. Some unit appear not to be recognized in international practice, which is contrary to the requirements of Rule 10.1(d) PCT.